ACTA PARASITOLOGICA POLONICA
VOL. VIII WARSZAWA, 15.XI.1960 FASC. 22

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The helminths of jay *(Garrulus glandarius* L.*)* and magpie *(Pica pica* L.*)* from Lublin Palatinate

Helmintofauna sójki (*Garrulus glandarius* L.) i sroki (*Pica pica* L.) województwa lubelskiego

The helminthofauna of the jay and magpie was in Poland elaborated only fragmentary and only by one author (Markowski, 1933). It is true that Ruszkowski (1925) examined some species of the raven birds but he was not concerned with the helminthofauna of the jay and magpie which is the subject of the present paper.

The sole work which refers to the internal parasites of the raven birds (among others also of 11 jays and 6 magpies) in Poland is the publication of Markowski (1933), in which the author presents fairly accurate descriptions of 17 species of worms found in several species of birds. He found the occurrence of the following parasites: *Prosthogonimus ovatus* (Rud., 1803), *Dilepis undula* (Schrank, 1788), *Hymenolepis serpentulus* (Schrank, 1788), *Tetrathyridium variabile* (Dies., 1850), *Agamospirura* sp., of which, however, I found in my material only *Hymenolepis serpentulus* (Schrank, 1788).

Because the studies on the helminthofauna of the jay and magpie were based only on several specimens I decided, therefore, to examine them more accurately on a larger material which consisted of two species of birds of the family *Corvidae:* 62 magpies — *Pica pica* (L.) and 46 jays — *Garrulus glandarius* (L.) from the environs of Lublin. The birds were collected mainly in 1958 and 1959. Complete helminthological dissections, staining and the mounting of the preparations were performed according to the generaly in parasitology accepted methods.

In the studied material I found 1 species of the trematode, 2 species of tapeworms and 5 species of nematodes.

With one species of parasite were invaded 26 magpies and 12 jays, with two species — 7 magpies and 3 jays, and with three species — 1 magpie. The remaining 28 magpies and 31 jays were free of parasites.

The presence of the parasites did not cause any visible anatomo-pathological lesions. The cause of this could be the small intensity of the invasion.

Table I

Extensity and intensity of invasion

Host	Examin.	Invaded	%	Class	Invaded	%	Parasite species	Invaded	%
Pica pica (L.)	62	34	55	*Tremat.*	—	—	—	—	—
				Cestoda	23	37	*Hymenolepis stylosa* (Rud.)*	23	37
				Nemat.	13	21	*Capillaria corvorum* (Rud.)	8	13
							Porrocaecum ensicaudatum (Zed.)	2	3
							Syngamus trachea Mont.	4	6
							Acuaria anthuris (Rud.)	2	1.5
Garrulus glandarius (L.)	46	15	33	*Tremat.*	1	2	*Lyperosomum longicauda* (Rud.)▲*	2	2
				Cestoda	6	13	*Hymenolepis serpentulus* (Schr.)	5	11
				Nemat.	8	17	*Capillaria corvorum* (Rud.)	1	2
							Porrocaecum ensicaudatum (Zed.)	1	2
							Disparynx laplantei (Seur.)*	3	6.4
							Acuaria anthuris (Rud.)	5	11

* — new for Poland; ▲ — new for the host

TREMATODES

Lyperosomum longicauda (Rudolphi, 1809)

Syn: *Distoma longicauda* (Rudolphi, 1809).

In my material in the total number of 62 magpies and 46 jays only one jay (2.0%) was invaded with the parasite of this species occurring in the small intestine.

Hosts: *Corvus corone* L., *Pica pica* (L.), *Corvus cornix* L., *Trypanocorax frugilegus* L., *Garrulus glandarius* (L.) (new host).

Habitat: the liver, gallbladder (in my material the small intestine).

Geographical distribution: Western Europe, U.S.S.R. (Kirghiz), Czechoslovakia. In Poland *L. longicauda* was found for the first time.

CESTOIDEA

Hymenolepis stylosa (Rudolphi, 1809) Railliet, 1899

Syn.: *H. (Drepanidotaenia) stylosa* Clerc, 1903; *Weinlandia stylosa* Mayhew, 1925; *Hymenolepis stylosa* (Fuhrmann, 1932) Skrjabin et Mathevossian, 1945.

I found *H. stylosa* in 23 magpies (37%) in numbers ranging from 1 — 24 specimens in one individual.

Hosts: *Corvus corax* L., *C. monedula* L., *C. corone* L., *Balagopan indicator indicator, Garrulus glandarius* (L), *Pica pica* (L.), *Trypanocorax frugilegus* L., *Turdus pilaris* L.

Habitat: the small intestine.

Geographical distribution: France, Belgian Congo and U.S.S.R. In Poland found for the first time.

Hymenolepis serpentulus (Schrank, 1788) Fuhrmann, 1908

Syn.: *Taenia serpentulus* Schrank, 1788, *Choanotaenia serpentulus* (Schrank, 1788), *Alyselminthus serpentulus* (Schrank, 1788), *Halysis serpentulus* (Schrank, 1788), *Drepanidotaenia serpentulus* (Schrank, 1788), *Taenia corvi frugilegi* Viborg, 1795, *T. corvi cornicis* Rudolphi, 1810.

I found *H. serpentulus* in 6 jays (13%) in numbers ranging from 1 — 20 specimens in one individual.

Hosts: *Anthus trivialis* (L.), *Corvus corax* L., *C. cornix* L., *C. corone* L., *C. torquatus* Less., *C. frugilegus* L., *Galerida cristata* L.,

Garrulus glandarius (L.), *Merula atrigularis* Temm., *Muscicapa striata* (Pall.), *Nucifraga caryocatactes* (L.), *Oriolus galbula* L., *Pica pica* (L.), *Trypanocorax frugilegus* L., *Turdus musicus* L., *T. merula* L., *T. pilaris* L., *T. torquatus* L., *T. viscivorus* L.

Habitat: the intestine.

Geographical distribution: Europe, Asia, Africa, U.S.S.R.

In Poland found for the first time by Markowski (1933) in *Corvus frugilegus* L., *C. cornix* L., *Pica pica* (L.), *Garrulus glandarius* (L.).

NEMATODA

Capillaria corvorum (Rudolphi, 1819) Travassos, 1915

Syn.: *Trichosoma corvorum* Rudolphi, 1819 (= *Capillaria corvi monedulae* Cat. End. Vind.); *Trichosomum corvi monedulae* Bellingham, 1845; *T. resectum* Dujardin, 1845; *Capillaria (Capillaria) resecta* (Dujardin, 1845) Travassos, 1915.

I found *Capillaria corvorum* in 8 magpies (13%) in numbers ranging from 1 — 3 specimens and in 1 jay (2%) one specimen.

Host: *Buteo rufinus* (Gret.), *B. lagopus* (Brunn); *Coloeus monedula* L., *Corvus frugilegus* L., *Garrulus glandarius* (L.), *Nucifraga caryocatactes* (L.), *Pica pica* (L.), *Turdus merula* L., *T. viscivorus* L.,

Habitat: the small intestine and stomach.

Geographical distribution: Western Europe, Japan, U.S.S.R. In Poland found for the first time by Kowalewski (1903) (fide Markowski, 1933) in *Corvus corax* L., *C. frugilegus* L., *C. cornix* L., *C. monedula* L. In the magpie and jay found in Poland for the first time by me.

Porrocaecum ensicaudatum (Zeder, 1800) Baylis, 1920

Syn: *Ascaris cornicis* Gmel., 1795; *Ascaris corvi glandarii* Viborg, 1795; *A. ensicaudata* (Zeder, 1800); *A. semiteres* (Zeder, 1800); *A. corvi frugilegi* Rud., 1819; *Fusaria ensicaudata* Zeder 1800; *A. heteroura* Mehl.

I found three specimens of *Porrocaecum ensicaudatum:* one male in the intestine of a magpie, one mature female in the stomach of a magpie and one young female in the intestine of a jay.

Hosts: some birds of the family *Alaudidae, Anatidae, Charadriidae, Rallidae, Corvidae, Scolopacidae, Laridae, Turdidae, Motacillidae, Oedicnemidae, Sturnidae, Sylvidae.*

Habitat: the intestine, stomach and rarely the oesophagus.

Geographical distribution: England, Switzerland, Poland, Germany, U.S.S.R. In Poland for the first time by Markowski (1933) in *Corvus frugilegus* L. and in *S. cornix* L. The present paper is the first report of the finding of *Porrocaecum ensicaudatum* in a jay in Poland.

Syngamus trachea (Montagu, 1811) Chapin, 1925

Syn.: *Fasciola trachea* Montagu, 1811; *Syngamus trachealis* Siebold, 1836; *Strongylus pictus* Creplin, 1849; *Sclerostoma tracheale* (Siebold, 1851; *Syngamus mucronatus* Schlotthauber, 1860; *S. primitivus* Molin. 1860; *S. bifurcatus* Theobald, 1896; *S. primitivus* (Molin, 1860) Hutyra et Marek, 1910; *Syngamus gracilis* Chapin, 1925.

I found *Syngamus trachea* in 4 (6%) magpies, 1 — 2 specimens in one individual.

Hosts: the definite hosts of this species of nematode are 15 species of *Passeriformes*, 15 species of *Galliformes* and 5 species of other birds.

Habitat: the trachea.

Geographical distribution: Europe, North America, South America, Asia (Formosa), Australia. In Poland found for the first time by Bezubik (1959) in a partridge (*Perdix perdix* L.). In the magpie this parasite is recorded by me for the first time.

Dispharynx laplantei (Seurat, 1919)

Syn.: *Acuaria (Dispharynx) laplantei* Seurat, 1919.

I found this parasite in 3 (6.5%) jays, 1 — 3 specimens in one individual.

Hosts: *Garrulus glandarius cervicalis* (L.), *G. glandarius* (L.).

Habitat: the stomach.

Geographical distribution: Africa (according to Cram, 1927). In Poland (and in Europe) found for the first time.

Acuaria anthuris (Rudolphi, 1819) Railliet, Henry et Sisoff, 1912

Syn.: *Spiroptera anthuris* Rudolphi, 1819; *Dispharynx anthuris* (Rud., 1819) Dujardin, 1845; *Filaria anthuris* (Rudolphi, 1819) Schneider, 1866; *Acuaria ornata* (Cendro, 1912) Schikhobalova, 1930.

Acuaria anthuris was found in the muscular stomach of 5 (11%) jays and 1 (1.6%) magpie, always one specimen in an individual.

Hosts: the majority are birds of the family *Corvidae, Oriolidae,* some *Sturnidae* and *Urocissa erythrorhyncha.*

Habitat: the glandular stomach (in my material under the corneous membrane of the muscular stomach).

Geographical distribution: Europe. In Poland found by Markowski (1933), in *Corvus corax, C. corone, C. frugilegus* and *C. cornix.* In the jay in Poland *A. anthuris* was found for the first time by me.

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STRESZCZENIE

Autorka zbadała 62 sroki i 46 sójek pochodzących z woj. lubelskiego, stwierdzając występowanie 1 gatunku przywry, 2 gatunków tasiemców i 5 gatunków nicieni (tab. I). Wśród znalezionych gatunków nowymi dla Polski okazały się 3, jeden zaś — *Lyperosomum longicauda* (Rud.) — nowym dla żywiciela, sójki.